

## **Dissertations Initiative for the Advancement of Limnology and Oceanography: DIALOG III and IV**

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Award #: N000149810590  
<http://aslo.org/phd.html>

### **LONG TERM GOALS**

Founded in 1993, the Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG) program seeks to (1) facilitate interdisciplinary, inter-institutional and international aquatic science research, understanding and collaborations; (2) reduce the historical, institutional and philosophical barriers that limit the exchange of information among aquatic scientists; and (3) expedite the transition from Ph.D. student to independent researcher.

### **OBJECTIVES**

DIALOG is an educational and human resource program. It targets aquatic scientists and those in related disciplines that have recently obtained their Ph.D. degrees and wish to pursue interdisciplinary aquatic science research. DIALOG has four major components

- *Ph.D. Dissertation registry*: Recent Ph.D. recipients are invited to submit an abstract of their Ph.D. dissertation research for inclusion in the DIALOG Dissertation Registry.
- *Database*: Demographic information is collected with the dissertation abstracts in order to characterize recent graduates for human-resource purposes.
- *Electronic Newsletter*: Jobs and other items of interest to recent grads are posted weekly through an electronic newsletter. Symposium participants can keep in touch after the symposium through listservs dedicated to each symposium cohort.
- *Symposium*: A symposium is held every other year to enhance interdisciplinary understanding and promote collegial interactions across the aquatic sciences. The fifth DIALOG symposium will be held October 19-24, 2003, at the Bermuda Biological Station for Research.  
As the program grows, new resources are added. A DIALOG reception for students and recent grads is currently held in conjunction with the annual ASLO meeting.

### **APPROACH**

Using advertisements through American Society of Limnology and Oceanography (ASLO), and other professional societies, mailings, handouts, and a web site, the program is announced as widely as possible to reach all potential participants. All program and symposium application procedures are

Report Documentation Page				Form Approved OMB No. 0704-0188	
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1. REPORT DATE <b>30 SEP 2002</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2002 to 00-00-2002</b>	
4. TITLE AND SUBTITLE <b>Dissertations Initiative for the Advancement of Limnology and Oceanography: DIALOG III and IV</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Whitman College,,Walla Walla,,WA, 99362</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT <b>Founded in 1993, the Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG) program seeks to (1) facilitate interdisciplinary, inter-institutional and international aquatic science research, understanding and collaborations; (2) reduce the historical, institutional and philosophical barriers that limit the exchange of information among aquatic scientists; and (3) expedite the transition from Ph.D. student to independent researcher.</b>					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>6</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

accomplished through the web site ([www.aslo.org/dialog.html](http://www.aslo.org/dialog.html)). Sponsoring and co-sponsoring societies now include ASLO, AGU, ERF, ESA, NABS, SIL, TOS and WSN.

1. *Ph.D. Dissertation registry*: The registry provides a unique introduction to the work of this most recent generation of aquatic scientists. Each year increasing numbers of graduates take advantage of the opportunity to be part of this international collection, and more scientists, employers and administrators use this resource to identify recent graduates and get an overview of their work. Dissertation abstracts are submitted on line and immediately posted on the ASLO web site in a format that can be searched by year, name, and key words (<http://aslo.org/phd.html>). Each issue of the *L&O Bulletin* contains dissertation citations and e-mail addresses of those submitting abstracts since the previous bulletin deadline. In addition to the recognition, program participants receive a compilation of abstracts, a directory, and a demographic profile of their cohort. Everyone who registers a dissertation is placed on an electronic distribution list to receive the weekly DIALOG Newsletter.
2. *Database*: Information submitted by program applicants and the results of surveys completed by symposium participants are compiled in a database and used to characterize program participants and to assess trends.
3. *Symposium*: If individuals wish to be considered for symposium participation, they are also asked to submit a two page CV (with list of peer-reviewed publications), a half page essay answering the question “Why did you select your particular dissertation topic, and what is the importance/significance/potential impact of your findings?”, a half page essay answering the question “Why do you want to attend the symposium/how will you and other participants benefit from your participation?” and, two letters of recommendation. A six member committee representing the breadth of the aquatic science research community reviews applicants and makes recommendations.

## WORK COMPLETED

*DIALOG III*: One hundred sixty six dissertations were registered with DIALOG III. The 166 program participants were citizens of 31 countries: Argentina (3); Australia (1); Austria (1); Belgium (1); Brazil (5); Canada (8); Chile (1); China (4); Denmark (1); Egypt (1); Finland (1); France (3); Germany (12); Greece (1); India (2); Indonesia (1); Israel (2); Italy (2); Japan (7); Kenya (1); Korea (1); The Netherlands (4); New Zealand (5); Norway (1); Poland (2); Russia (3); Sweden (9); Switzerland (1); Turkey (1); United Kingdom (3); and United States (78). Of the 166 DIALOG III participants, 92 completed their Ph.D. at U.S. institutions (Table I), including 16 citizens of other countries (2 Brazilians, 2 Canadians, 2 Chinese, 1 Dutch, 3 Germans, 1 Israeli, 1 Korean, 2 Russians, 1 Swedish and 1 Swiss). Two of the 78 American citizens completed their degrees outside the U.S. (one in Sweden and one in Denmark).

*DIALOG IV*: The 221 participants were citizens of 40 countries: Australia (11), Austria (3), Belgium (2), Brazil (5), Bulgaria (1), Canada (15), Chile (1), China (11), Czech Republic (2), Denmark (3), Finland (2), France (3), Germany (22), Greece (1), Hungary (2), India (1), Israel (1), Italy (1), Japan (4), Jordan (1), Lithuania (1), Malawi (1), Mexico (1), Netherlands (5), New Zealand (2), Nigeria (1), Poland (2), Portugal (2), Russia (2), South Korea (3), Spain (2), Sweden (6), Switzerland (1), Thailand (1), Turkey (1), Ukraine (3), United Kingdom (12), United States (81) Uruguay (1) and Venezuela (1).

*DIALOG V*: The DIALOG V program cycle is already underway, with 224 dissertations registered in the first 19 months of the 27-month program cycle (Table I). So far, 109 have been submitted by American citizens and 129 registrants completed their PhD at a US institution (Table I). The DIALOG V Symposium is scheduled for October 19-24, 2003 at the Bermuda Biological Station for Research.

## RESULTS

DIALOG continues to grow. The proportion registering dissertations without applying for the symposium (44%) reflects graduate interest in being part of the on-line Dissertation Registry and receiving the weekly electronic DIALOG Newsletter. See <http://aslo.org/phd.html> for details. The acceptance rate for the DIALOG IV symposium was 39% overall and 56% for American citizens. Many qualified American and other candidates were declined due to lack of space; participation continues to be limited to around 40 since group dynamics change above that level. The 6-member application review committee agreed that the quality and quantity of applicants could support an annual symposium rather than the current biennial cycle

**Table 1. Comparison of DIALOG I, II, III, IV and V Programs.**

In some cases the registrants did not provide all demographic information requested and so totals below do not always add up to the total for abstracts submitted. The deadline for the DIALOG V symposium is May 1, 2003, so more abstracts are expected and statistics on the symposium are not yet available. Figures are as of Aug. 21, 2002

<b>DIALOG Program # PhDs completed</b>	<b>I 06/92- 09/94</b>	<b>II 10/94- 03/97</b>	<b>III 04/97- 03/99</b>	<b>IV 04/99- 12/00</b>	<b>V 01/01- 03/03</b>
Abstracts Submitted	80 27 months	98 31 months	166 24 months	221 21 months	224 to date (20 months)
Applied to Symposium	67 of 80	87 of 98	92 of 166	124 of 221	---
American Citizens	42	37	78	81	109
Other Citizenship	38	61	88	140	115
PhD Institution - USA	53	43	92	105	129
PhD Institution - Other	27	55	74	116	95
Limnologists	28	58	62	81	59
Oceanographers	52	40	104	140	140
Hydrologists and global					22
Male	52	47	97	129	133
Female	28	51	69	86	89

## IMPACT

The DIALOG Program is a long-term investment in human resources and science infrastructure. Direct and indirect results should benefit the aggregate research community, as well as our society, which increasingly depends on research results for understanding and managing aquatic systems and resources. The most interesting and important questions in aquatic and other sciences today are increasingly interdisciplinary. Our scientific community and society as a whole are increasingly global, interdependent, and interactive. Therefore the very concept of the DIALOG program is pertinent and timely as it facilitates the vital exchange of knowledge, ideas, and science that is necessary in this new

scientific climate and global community. The symposium, in particular, brings together scientists at a pivotal point in their research careers, from across the full spectrum of biologically relevant aquatic science, from a variety of scientific backgrounds, from various institutions, and from different countries and cultures. This dynamic mix participates in an intensive seven-day symposium where all participants gain an overview of the work of the others and are exposed to different ways of thinking about and conducting research. The collegial bonds and lines of communication formed will remain throughout their professional careers to sustain, stimulate, and enhance their work. The scientific community and the general population benefit from the perspectives these “new” scientists bring back to their home institutions (and countries) and then go on to share with their students and colleagues. The international composition ensures that these American grads are exposed to the best of global science and make connections with their counterparts in the US and abroad.

## **TRANSITIONS**

1. Participants in the DIALOG symposia have been involved in interdisciplinary (including some international) research collaborations; an international student exchange program at two institutions; the organization of several workshops and meeting sessions; and the ongoing communication throughout the entire group about research, education and science policy issues via an electronic distribution list. A recent survey of past symposium participants gave the symposium an overall rating of 9.1 on a scale of 1-10, with 10 being excellent. In particular, participants stressed the benefit of being able to establish collegial networks with their peers across a broad range of disciplines and institutions.
2. The dissertation compilation (available on the web site and compiled into a printed publication after each symposium) has been and is continuing to be used by established scientists, managers and students to get an overview of the latest research and to identify these new entrants to the scientific community. Use has grown from 22,000 “hits” on the website in 2000 to 44,000 in 2001.
3. The demographic information is providing a profile of the newest entrants to the aquatic science community--their gender, age, ethnicity, citizenship, Ph.D.-granting institutions and subsequent employers, and disciplinary interests. This information will enable a variety of interest groups to better track the aquatic science community (which has been difficult to profile, due to the large number of degree-granting institutions, departments in which an aquatic scientist might reside, and variety of key words under which aquatic science falls in general science databases).

## **RELATED PROJECTS**

With NSF funding, the PI had developed electronic resources to identify and enhance minority participation in the aquatic sciences, and general understanding of minority issues throughout the aquatic science community. The program focuses on undergraduate and graduate minority students, and works closely with a workshop developed by Dr. Benjamin Cuker, which brings together minority students at the annual ASLO meetings. Identification of underrepresented minorities has enabled us to enhance their participation in the DIALOG Dissertation Registry and Symposium.

Symposium participation is limited to 40 participants due to time limitations and the breakdown in group dynamics that occurs with larger groups. DIALOG has been on a biennial symposium schedule. The DIALOG IV application review committee agreed that the quality and quantity of applicants was sufficient to justify holding the symposium on an annual cycle rather than its current biennial schedule.

Due to the popularity of the program and recent increases in numbers, the NOAA Coastal Ocean Program is funding a "pilot" symposium to test the concept of holding annual symposia, with the traditional DIALOG symposia alternating with a symposium targeting estuarine and coastal scientists and focusing on management as well as research. The estuarine/coastal symposium is sponsored by Whitman College and the Estuarine Research Federation (ERF). Seventy two grads applied for the symposium. Participants are in the process of selection.

## PUBLICATIONS

Weiler, C.S. 1999. DIALOG III: Dissertation Initiative for the Advancement of Limnology and Oceanography. Abstracts of Ph.D. dissertations completed between April 1, 1997 and March 31, 1999. 166 pp.

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Burks, R.L., D.R. Corbett, D.M. Gibson, D.L. Hoskins, S.A. Ludsins, K.I. Stocks and C.S. Weiler, submitted. Successful Mentoring: Reflections of recent aquatic science PhDs. *Submitted to Bioscience*.

*Webpages developed and updated by C.S. Weiler:*

Programs for recent PhDs: <http://aslo.org/phd.html>

DIALOG Dissertation Registry: <http://aslo.org/dialog/dcite.html>